Published in final edited form as:

J Sex Med. 2017 August ; 14(8): 1011–1017. doi:10.1016/j.jsxm.2017.05.014.

Patient-Centered Outcomes and Treatment Preferences Regarding Sexual Problems: A Qualitative Study among Midlife Women

Holly N. Thomas, MD, MS^{a,d}, Megan Hamm, PhD^a, Rachel Hess, MD, MS^b, Sonya Borrero, MD, MS^{a,d}, and Rebecca C. Thurston, PhD^{c,d}

^aDepartment of Medicine, University of Pittsburgh, 230 McKee Place Suite 600, Pittsburgh, PA 15213, United States

^bDepartments of Population Health Sciences and Internal Medicine, University of Utah, 50 North Medical, Drive Salt Lake City, UT 84132, United States

^cDepartment of Psychiatry, University of Pittsburgh, 3811 O'Hara St. Pittsburgh, PA 14213, United States

^dCenter for Women's Health Research and Innovation (CWHRI), University of Pittsburgh, 230 McKee Place Suite 600, Pittsburgh, PA 15213, United States

Abstract

Background—Sexual dysfunction is common among midlife women and can have a significant negative impact on quality of life. While treatments exist, there is little research regarding which sexual function outcomes and treatments midlife women prefer.

Aim—We used individual interviews and focus groups of sexually active women aged 45–60 to better understand both the sexual function outcomes that were most important to them and the types of treatments they would prefer.

Methods—Twenty individual interviews and 3 focus groups (total N=39) were led by a trained facilitator, audio recorded, and transcribed. Two investigators developed a codebook, and the primary investigator coded all data. A second investigator coded 5 randomly selected interviews to ensure inter-coder reliability. Codes relating to outcomes and treatment preferences were examined to identify central themes.

Results—The mean age was 52.8 (range 45–59). When asked what they would want a sexual dysfunction treatment to do, women sought solutions to specific sexual problems: low desire, vaginal pain and dryness, and decreased arousal or ability to achieve orgasm. However, when asked about the most important aspect of their sex life, most women indicated emotional outcomes, such as enhanced intimacy with their partner, were most important to them. Most

Corresponding author: Holly N. Thomas, MD MS, University of Pittsburgh, 230 McKee Place Suite 600, Pittsburgh, PA 15217, thomashn@upmc.edu.

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women preferred behavioral over pharmaceutical treatments, citing concerns about side effects. These women felt that behavioral treatments may be better equipped to address both physical and psychological aspects of sexual problems.

Clinical implications—This study highlights the importance of considering not only physical, but also emotional outcomes, when evaluating and treating sexual dysfunction in midlife women. It also emphasizes the importance of developing behavioral treatments in addition to pharmaceutical treatments.

Strengths & Limitations—By using a qualitative approach, this study allows women the time and space to speak their own words about their experiences with sexuality at midlife. In addition, a variety of racial/ethnic groups and menopausal statuses were represented. Limitations include limited generalizability, as is true for most qualitative research. Additionally, while the majority of women did endorse sexual problems, we did not exclude women with no sexual complaints.

Conclusions—Midlife women value both physical and emotional outcomes with regards to sexual function. Many midlife women in this sample expressed a preference for behavioral approaches over pharmaceutical approaches for the treatment of sexual dysfunction.

Keywords

patient-centered outcomes; female sexual function; female sexual dysfunction

INTRODUCTION

Sexual function can be conceptualized as an individual's ability to participate in and experience pleasure from sexual activity; it includes both *physical domains*, (physical arousal/lubrication, orgasm, pain), as well as *psychological domains* (subjective arousal/desire, satisfaction). Sexual function is a key component of overall quality of life and well-being for adults across the lifespan (1, 2). However, sexual dysfunction is common among women, particularly at midlife, and can have a significant negative impact on quality of life and relationships. Forty-three percent of women report at least one sexual problem (3, 4), and the prevalence of sexual dysfunction is highest at midlife (aged approximately 45–60) (4). Women with sexual dysfunction have significantly lower quality of life and general happiness (1, 2, 5, 6), and low sexual satisfaction is associated with worse marital quality (7).

Treatments for female sexual dysfunction have been developed and tested. However, sexual function is a multifaceted concept, and there is a lack of consensus about which sexual function outcomes are most important to women. Initially, the Food and Drug Administration (FDA) recommended number of satisfying sexual events over 4 weeks as the primary outcome in pharmaceutical clinical trials. Experts have questioned whether this is a meaningful outcome for women, and many recommend the use of multidimensional patient-reported outcome instruments instead (8–10). While experts have voiced their recommendations, there is little existing research where patients themselves have voiced preferences for sexual function outcomes. Rosen et al. and Quirk et al. used individual interviews in the development of the Sexual Functioning Questionnaire (SFQ) and the Female Sexual Function Index (FSFI) respectively, but their reporting on the results of the

interviews is somewhat limited (11, 12). Flynn et al. published results from focus groups used in the development of the Patient Reported Outcomes Measurement Information System (PROMIS) Sexual Function and Satisfaction Measures (13). In this study, participants emphasized the importance of interpersonal intimacy to sexual function and satisfaction. However, these focus groups were limited to individuals with cancer.

Additionally, the outcomes that are most important to midlife women may differ from those of younger women. For example, evidence suggests that as women age, physical aspects of sex, such as lubrication and orgasm, become less important and emotional aspects, such as intimacy with one's partner, become more important (14, 15). Further, while older models of sexual response focused on physical response, such as the achievement of orgasm, newer models of female sexual response proposes that both physical *and* emotional satisfaction are important outcomes of sexual activity for women (16). This physical and emotional satisfaction can facilitate increased receptivity to sexual stimuli in the future. Follow-up studies exploring whether newer models resonate with women have been mixed. In some studies, women with sexual dysfunction were more likely to identify with newer models (17, 18), while another study showed that women may endorse *both* older and newer models depending on the situation (19). More recently, there have been calls for composite models that integrate aspects of both (20).

In addition, there is little research exploring what *types* of sexual dysfunction treatments women prefer. More research has focused on the development of pharmaceutical treatments, but pharmaceutical options have faced challenges of modest efficacy and adverse effects (21). Women's preferences with regards to pharmaceutical versus non-pharmaceutical treatments have not been well studied.

To develop treatments that will improve midlife women's health and quality of life, we require a better understanding of the outcomes and treatments that matter most to them. In this analysis, we used a phenomenological approach with 20 individual interviews and 3 focus groups of sexually active women aged 45–60 to better understand: (a) the sexual health outcomes that were most important to them; and (b) the types of treatments they would prefer. As the existing literature regarding these subjects is limited, exploratory research using qualitative methods is appropriate.

MATERIAL AND METHODS

Study sample

Study participants were recruited from the general population of Pittsburgh, PA using online and newsletter advertisements, fliers, and a research registry. The recruitment materials stated that this was a research study to gain a deeper understanding of what is most important to midlife women's sexual satisfaction (recruitment text is in supplementary materials). They were screened for eligibility over the telephone after giving verbal assent to form a convenience sample; women were eligible if they were aged 45–60 and had been sexually active with a partner (male or female) at least once in the prior 12 months. Women were given the option to participate in either an individual interview or a focus group.

Individual Interview and Focus Group Conduct

Interviews and focus groups were conducted from December 2014 through May 2015 face-to-face in a private research office by a facilitator with extensive experience in qualitative research and sensitive topic areas such as sexuality (M.H.). The primary investigator (H.T.) was present in the corner of the room at focus groups taking notes. Each interview and focus group lasted approximately 60–90 minutes. We chose to use both interviews and focus groups as focus groups may uncover new themes due to group dynamics, and interviews allow us to hear the perspectives of women who do not wish to discuss sexuality with a group.

An introductory script encompassing the study's purpose and all elements of informed consent was read to participants at the start of each session. This included information on the purpose of the study, that participation was voluntary, that individuals may choose to leave the study at any time, and that participants may speak as much or as little as they feel comfortable doing. Participants were then given the option to continue to participate or leave the study. These procedures followed the University of Pittsburgh Institutional Review Board's recommendation for this verbal informed consent process.

Interviews were facilitated by a semi-structured guide (see supplementary materials), and focus groups relied on an abbreviated version of the same guide. Each session was audio-recorded and transcribed verbatim (names excluded). A random 10% section of each transcribed interview and focus group was reviewed against the audio to ensure accuracy. Each participant completed a demographic questionnaire, which was linked to the corresponding transcription using a study identification number. The University of Pittsburgh's Institutional Review Board approved the study.

Sample size in qualitative research is guided by the concept of thematic saturation, which means no new information or themes are uncovered in the course of ongoing interviews and focus groups (22–25). Thematic saturation was achieved in both interviews and focus groups. As the goal in qualitative research is more focused on understanding a phenomenon in-depth as opposed to hypothesis testing or generalizability, sample sizes tend to be smaller than in quantitative research. Our sample size is consistent with general qualitative research norms (26–28).

Analysis

Data analysis proceeded using a thematic analysis approach using a fine-grained editing style as described by Crabtree and Miller, in which the coder searches for “meaningful units or segments” of text which are coded and categorized (29). The primary investigator read all transcripts and met with the facilitator to develop a draft codebook. Codebook development proceeded in an iterative process, with investigators reading and coding two randomly selected interviews then meeting to review agreement. A final codebook was agreed upon after double-coding of 4 interviews. The primary investigator proceeded to code all transcripts. The same codebook was used for interviews and focus groups. Atlas.ti software was used to assist with coding (Scientific Software Development, Berlin). The facilitator coded a randomly selected 5 interviews to ensure inter-coder reliability and kappa statistics

were calculated (overall kappa=0.84 indicating excellent inter-coder agreement). Codes relating to outcome and treatment preferences were then examined to identify broader themes. Representative quotations were selected to illustrate themes. Because similar themes emerged in both individual interviews and focus groups, key concepts from both have been combined in the results section.

RESULTS

Demographics

We conducted 20 individual interviews and 3 focus groups (total N=39). No women dropped out of the study after enrollment. Mean age was 52.3 in the interviews and 53.4 in the focus groups (Table 1). About 60% of women in both interviews and focus groups were married or cohabitating with a partner. A range of racial/ethnic groups, education statuses, and menopausal statuses were represented. All women but two reported their sexual orientation as heterosexual.

Outcome preferences

When asked about what they would want a treatment to do, women usually referenced specific sexual problems they wanted corrected, including low desire, sexual pain and vaginal dryness, and decreased responsiveness and orgasm. Increased desire was one of the most commonly cited goals of treatment. One 51-year-old woman said, “I would like to know what things could I do that would help increase my sexual desire.” A 50-year-old woman stated, “Desire... If I had desire, everything else would fall into place.” Other women reported issues with sexual pain and vaginal dryness: “I’d want it [treatment] to stop the pain... I want it to go back to the way it used to be” (55-year-old woman). Many women noted they would like increased sexual responsiveness and ability to achieve orgasm. One 53-year-old woman stated, “Why can’t they come up with a female Viagra?... Something that improves sexual response in the same way you can help a man get an erection. Can’t a woman, you know, feel more... aroused. I remember the days I could think about sex and I would start feeling tingly down there, you know?” A 47-year-old woman noted, “I don’t climax nearly as often and when I do, I have to work much, much harder at it... I don’t like that at all. That’s really been the biggest [issue].” Some women discussed that even a small improvement in symptoms would make a treatment worth taking.

Most important aspect of sex life and defining sexual satisfaction

When asked broader questions, such as, “what is the most important aspect of your sex life,” and “How do you define a satisfying sex life,” women were more likely to discuss emotional outcomes than physical outcomes such as arousal or orgasm. There were 3 major themes in these emotional outcomes: (1) enhancing intimacy and connection with one’s partner; (2) cultivating mutual pleasure and reciprocity; and (3) feeling loved and desired.

Almost all women brought up enhancing intimacy and connection as important to sexual satisfaction. One 48-year-old woman said, “I just think the bond between a man and a woman – when you’re touching, when you’re having intercourse, there’s no closer bond you can get to somebody.” Another 58-year-old woman said, “I think the feeling of intimacy is

the most important thing.” And when asked what was most important to her regarding sex, a 51-year-old woman said: “The connection we get with each other... just the connection, like our souls or spirits... It’s a beautiful feeling for two people to be wrapped up with each other.”

Women noted that this sense of intimacy was more important to them than physical satisfaction. Some women noted this had changed as they got older – when they were younger, physical satisfaction was more important. When asked about the most important part of her sex life, one 48-year-old woman described it this way: “Making sure that we’re intimate and communicating and even if we’re not in the mood... there’s other ways to be intimate. You don’t have to necessarily be having sexual intercourse to be being sexually active... it’s just being intimate in your conversation and you’re holding hands and just taking that time. That is so important...” Another woman, 58 years old, said, “If it gives you that feeling of intimacy... Both of you don’t have to have orgasm every time. That used to be the goal 20 years ago. Now it’s just that feeling of closeness.”

Many women also cited mutual pleasure and reciprocity as an important aspect of sexual satisfaction. Women talked about how it was important to them, and to their partners, that both individuals felt sexually satisfied. “But I get enjoyment out of knowing that I’m pleasing my partner, too. That’s satisfying to me,” said a 55-year-old participant. When the interview asked about the most important aspect of her sex life, another 55-year-old woman said, “That I can perform for him, that I’m not always the one just laying there.” Many women mentioned that both partners reaching orgasm was important to a satisfying sexual encounter. One 56-year-old woman explained, “Well, I mean, you have to have an orgasm, and if we don’t, if both of us don’t or one of us doesn’t, then it’s like not good... So definitely both of us being after to have an orgasm during the act is really important.”

Finally, several women felt the most important aspects of a satisfying sex life was sex as confirmation that they were loved and desired by their partners. Feeling attractive was an important motivator for sex. “[N]umber one would be feeling like my husband wants me... Having that feeling that he desires me, that he’s passionate about me – that’s really important. Like you want him to want you, not just like well, he’s had a long week, he needs to have that release, therefore I’m the vessel. You know, I really want him to be into me,” said one 56-year-old woman. A 58-year-old participant said, “It makes me feel good to know that my partner is still interested in... wanting to have sex at this later time in our life.” These women wanted to feel that their partners were not just interested in sex, but interested in sex with *them* specifically. These women cited sex as confirmation that their partners are still attracted to them, particularly in the context of a long-term relationship, and in spite of changes in their physical appearance.

Treatment preferences

Behavioral versus pharmaceutical treatments—In addition to outcomes, women also discussed what *types* of treatments for sexual problems they would prefer, specifically pharmaceutical versus behavioral treatments. Many women stated they would prefer behavioral treatments.

“I’m going to say something more behavioral. I think a pill is just a cover up, and I think actually talking to somebody, counseling... I think talking to people’s the best way, absolutely.” – 48-year-old woman

Focus group:

57-year-old woman: I would prefer talking as opposed to medication.

46-year-old woman: I would, also.

Interviewer: I saw a number of people agreeing. So why would you prefer behavioral and talking?

57-year-old woman: The reason why I say that is because I think it’s all emotion and just being honest with people, ‘cause they may have the same fears that we have.”

The women who preferred behavioral treatments cited several reasons. Some were concerned about side effects of medications. Said one 43-year-old woman, “I don’t like taking pills... it’s got side effects and I’d rather talk because I don’t mind talking about [sexual problems].” Some felt that sexual problems, especially in women, can have emotional as well physical components that may be more fully addressed by behavioral approaches: “But I think probably the behavioral just because... women as a whole involve more of all of their feelings and thinking when it comes to sex” (58-year-old woman).

Some women said that they would accept *either* a behavioral or pharmaceutical approach. They felt the choice of approach depended upon the type of problem; for example, if the main problem is dryness, a medication may be more helpful, but if the main problem is desire, talking with someone may be more helpful. Some women expressed concern that not everyone would be comfortable talking to someone else about a sensitive subject like sexuality, and for those women pharmaceutical options should be available. Said one 48-year-old woman, “We don’t want to talk about sex. Maybe we’re getting to the point where we can be more open about sex but most women, no. Part of it is the era that we come from.” Some women felt both a medication and a behavioral treatment used together would be most effective. A few women brought up the idea that medications might be more convenient and work faster than behavioral treatments. Only two women specifically stated that they would prefer pharmaceutical options exclusively. One 53-year-old woman said, “I probably would be more interested in medication... I don’t think it’s something that I would want to do on a regular basis... sitting around talking about things, especially when it’s something that only involves me or my husband.”

Multiple women mentioned that they would be more accepting of pharmaceutical treatments if they were “natural,” mainly because they perceive these types of treatments as having fewer side effects. One 55-year-old woman said, “So I really don’t want to add another pill. If it was holistic and it was herbal and you know, natural that’d be a different story.”

Preferred aspects of behavioral interventions—Some women described aspects of a behavioral treatment that they believed would be most helpful. Some felt group-based treatments would be beneficial because sharing experiences and potential solutions to sexual

problems as part of a group of peers would make for an effective treatment. Said one 57-year-old woman, “I would want to learn new things to try, talk to support group or something like that, work with other people, you know, suggestions.” Said a 58-year-old woman, “The shared experience is good, too... it may be nice to know that there’s some shared challenges and all different kinds of people...”

A few women thought behavioral treatments should teach women how to enhance communication with sexual partners, especially regarding communication of sexual needs. In one focus group, a 58-year old woman asked, “What would you discuss in behavioral therapy?” and a 46-year old woman answered, “I think a lot of it comes down to being able to sit and talk with your partner about what you like, what you don’t like, what do they like, what don’t they like... So I think if there was ways for them to be able to understand through the communication but not trying to tell you you’re doing it wrong.”

DISCUSSION

In this qualitative study of sexually active women aged 45–60, we addressed: (1) what sexual health outcomes are most important to these women and (2) what types of treatments for sexual problems they would prefer. We found that if asked what outcomes sexual dysfunction treatments should target, women cited specific sexual problems, such as vaginal dryness or low libido. However, if the question was asked in a different way – what is the most important aspect of your sex life – women were more apt to cite the importance of emotional outcomes. These emotional outcomes included enhanced intimacy with one’s partner, a feeling of sexual reciprocity, and feeling loved and desired. Many women stated they would prefer behavioral to pharmaceutical treatments, citing concern about side effects and feeling that behavioral treatments are better able to address emotional aspects of sex.

The sexual problems that women in this study cited were similar to those in prior studies. Longitudinal studies have shown that vaginal dryness, low libido, sexual pain, and difficulties with arousal and orgasm become more common as enter midlife. These types of outcomes are captured effectively by existing multidimensional measures, such as the Female Sexual Function Index (FSFI)(12).

However, this study found that *emotional* outcomes are also of vital importance. In their qualitative study regarding sexual function among cancer patients, Flynn et al. also found that emotional intimacy was vital to sexual function, and that physical sexual function did not always correlate with overall sexual satisfaction (13). Taken along with our findings, this calls into question whether a treatment that enhances physical outcomes but has no effect on feelings of intimacy or sexual satisfaction addresses the sexual outcomes most important to women. Of course, physical and emotional aspects of sex are often interdependent (e.g., experiencing orgasm during a sexual encounter may lead to feelings of enhanced emotional intimacy). The importance of emotional outcomes to female sexuality is highlighted by the Basson conceptual model of female sexual response (16). This model emphasizes that women do not participate in sexual activity solely to fulfill physical needs; they are filling emotional needs as well. Clinical trials of pharmaceutical treatments for female sexual dysfunction have not emphasized emotional outcomes. These downstream effects may be

less likely to respond to treatments than physical outcomes, and measuring these types of outcomes may be more challenging than “harder” outcomes such as frequency of sexual intercourse. Given the centrality of emotional outcomes to women’s motivations for sex, further study on whether and how sexual dysfunction treatments impact these emotional outcomes is necessary. In addition, further development of patient-centered measures that include physical and emotional outcomes is warranted.

The women in this study mostly favored behavioral over pharmaceutical treatments for sexual dysfunction. Researchers should continue to develop and test both behavioral and pharmaceutical treatments. Behavioral treatments may be more likely to affect the downstream emotional outcomes that women find important. Overall, women want options with regards to treatments for female sexual dysfunction so they can make an informed choice based on their own individual needs and values.

We noted that women were enthusiastic about group-based behavioral treatments for female sexual dysfunction, which would allow for exchange of experiences and information that may enhance the treatment itself. Even though our research focus groups only lasted about 60–90 minutes, the women appeared to form some camaraderie, and in all the groups there were instances where women were providing support, feedback, and advice to one another.

This study has several limitations. As is typical for qualitative research, the sample size is relatively small. However, the use of prolonged individual interviews and focus groups allow us to collect more nuanced information than could be obtained by a survey with a larger sample size. Because we were interested in women’s current perspectives on sexuality, we included only women who had been sexually active in the prior year. The experiences of those who have lost a partner or stopped having sex are not included. As this was part of a study exploring changes in sexuality at midlife, we did not exclude women without sexual dysfunction. While the majority of women in the study did endorse sexual problems in interviews and focus groups, there were a few women who did not have any current major sexual complaints. For the latter group, answering questions about outcome and treatment preferences was therefore hypothetical. Finally, we included women from different stages of menopause, which results in a heterogeneous sample; however, this also allows perspectives from across the menopausal transition to be heard.

This study is unique in its use of a qualitative approach to explore what sexual function outcomes are important to women and what types of treatments they prefer. In contrast to questionnaires, qualitative approaches give women the time and space to speak their own words about their experiences. Therefore, qualitative approaches can be a valuable supplement to quantitative approaches. Additionally, the mix of individual interviews and focus groups allowed us to speak with women who were not comfortable talking in group but also to capitalize on the group dynamics that can yield new information, such as group agreement or disagreement with ideas. Finally, we obtained a diverse variety of perspectives from women of different races and stages of menopause.

This study highlights the importance of assessing not only physical, but also emotional outcomes, when evaluating and treating sexual dysfunction in midlife women. It also

emphasizes the importance of developing behavioral treatments, in addition to pharmaceutical treatments. Future work should focus on the development of measures that can assess diverse outcomes and ensuring that treatments include elements likely to impact both physical and emotional outcomes. This focus on both physical and emotional aspects of sexual function is essential to ensuring that treatments will impact the outcomes that truly matter most to women.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

We thank the women who participated in this study for sharing their experiences so generously. We thank the members of the Research Stakeholder Advisory Board, who provided feedback on the interview guide and assisted with interpretation of study results (Lee Hart RN, Judith Volkar MD, Constance Lappa MSW LCSW, and Patricia Coyle MD). This work was funded by a grant from the Agency on Healthcare Research and Quality (AHRQ, grant #5K12HS022989-03, PI: Wishwa Kapoor).

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Table 1

Participant characteristics

	Individual interview participants (N=20)	Focus groups (3 groups, 19 participants)
Age, years, mean (range)	52.3 (45–58)	53.4 (46–59)
Married or cohabitating, N(%)	12(60)	11 (61) *
Race/ethnicity, N(%)		
White	8 (40)	13 (68)
Black	9 (45)	5 (26)
Other	3 (15)	1 (5)
College degree or higher education status, N(%)	9 (45)	12 (63)
Self-reported menopausal status, N(%)		
Premenopausal	3 (15)	2 (10)
Perimenopausal	9 (45)	8 (42)
Postmenopausal	4 (20)	7 (36)
Not sure	4 (20)	2 (10)

* One woman did not answer the marital status question